

MAR 05 2007

I. AMENDMENTS TO THE SPECIFICATION**A. Amendments to the Abstract**

Please amend the Abstract as shown below to overcome the Examiner's objection that the "reference number for interaction design system should be changed from 10 to 12." (Office Action, p. 2)

An interaction design system (12) may be used by a designer to design a user interface. The designer supplies the interaction design system with a domain model (22) that contains information characterizing an application in a domain, a user model (24) that contains information characterizing the users of the user interface, a task model (26) that contains task primitives to be performed between the user and the user interface and the type of information required by the task primitives, and a device model (28) that contains information characterizing the interaction delivery devices that are available to deliver the user interface. The interaction design system ~~[[10]]~~ (12) then matches the interaction delivery devices in the device model (28) to the type of information required by the task primitives and to the information characterizing the users, matches presentation objects (30) to the task primitives and to the information of the domain model (22), and generates the user interface based on the matches (32).

B. Amendments to Paragraph [0025]

Please amend paragraph [0025] as shown below to: (1) overcome the Examiner's objection that "a whitespace character should be added after the colon (:) in page 14, line 2" (Office Action, p. 2); and (2) correct a misspelling.

[0025] The RDF Specification is described in the documents "~~Resouce~~ Resource Description Framework (RDF) Model and Syntax Specification: W3C Recommendation 22 Feb. 1999", and "RDF/XML Syntax Specification (Revised): W3C Working Draft 23 Jan. 2003", both herein incorporated by reference. The domain model 22 created by the designer is stored in the memory 18 so that it is available to the interaction design system 12 during its execution on the computer 10.

C. Amendments to Paragraph [0035]

Please amend paragraph [0035] to strike "is" from the last sentence to overcome the Examiner's objection to page 20, line 10. (Office Action, p. 2)

[0035] Moreover, the task models 26 also include the information required by the task primitives of the tasks being modeled. For example, the task primitive receive requires that information be received by the user. The designer defines the type of information for this task primitive in the task models 26. As another example, the task primitive instantiate requires that information be instantiated. The designer defines the type of information for this task primitive instantiation in the task models 26. As still another example, the task primitive compare requires that certain information be compared to certain other information. The designer defines the type of information for this task primitive compare in the task models 26. The other task primitives also require information typing, and the designer defines the type of information for each of these task primitives that is used in the task models 26 as well. The task models 26 created by the designer are stored in the memory 18 so that they are [is] available to the interaction design system 12 during its execution on the computer 10.

D. Amendments to Paragraph [0064]

Please amend paragraph [0064] to add a period (.) at the end of the last sentence as shown below to overcome the Examiner's objection that "[a] period should be added at the end of the sentence in page 37, line 22." (Office Action, p. 3)

[0064] Also, the flow chart of FIGS. 3A and 3B is described above (particularly with respect to blocks 40-56) as generating all presentations for all interaction requirements prior to generation of the XML file. Instead, a presentation can be added to the XML file one interaction requirement at a time until all interaction requirements are designed into the user interface.

E. Amendments to Paragraph [0037]

Please amend paragraph [0037] as shown below to overcome the Examiner's objection that "the specification does not explain what the acronym IDS stands for." (Office Action, p. 3)

[0037] The following is an abbreviated example of an RDF document adhering to the IDS Interaction Design System RDF Schema for the task modeling 26 in the prescription drug ordering and filling application:

F. Amendments to Paragraph [0047]

Please amend paragraph [0047] as shown below to comply with the Examiner's request that "[t]rademarks should be capitalized wherever they appear...accompany each trademark with an

appropriate designation symbol...and be accompanied by the generic terminology." (Office Action, p. 3)

[0047] The following is an abbreviated example of an XML composer, written in Java the JAVA® programming language, for the presentation elements library 30 in the prescription drug ordering and filling application:

G. Amendments to Paragraph [0007]

Please amend paragraph [0007] as shown below.

[0007] In accordance with one aspect of the present invention, a method of interactively designing a user interface comprises the following: receiving a domain model, a user model, a task model, a device model, and a presentation elements library, wherein the domain model defines application requirements for which the user interface is to be used, wherein the user model defines user requirements of the users who are to interface with the user interface, wherein the task model defines task requirements of tasks to be performed between the user interface and the users, wherein the device model defines interaction delivery devices that are available to deliver the user interface, and wherein the presentation elements library contains the display objects used to present information to or acquire information from a user of the user interface being designed; generating a set of presentations, wherein each presentation in the set of presentations comprises an interaction delivery device and a display object that meets the requirements of the interaction delivery device, wherein the interaction delivery device is selected from the set of interaction delivery devices in the device model that meets the user requirements defined by the user model and the task requirements defined by the task model, and wherein the display object is selected from the set of display objects in the presentation elements library that meets the task requirements defined by the task model and the application requirements defined by the domain model; and displaying the set of presentations to a user interface designer. ~~receiving a domain model, a user model, a task model, and a device model, wherein the domain model characterizes an application for which the user interface is to be used, wherein the user model characterizes users who are to interface with the user interface, wherein the task model characterizes tasks to be performed between the user interface and the users, and wherein the device model characterizes interaction delivery devices that are available to deliver the user interface; and, matching characteristics in the domain model, the user model, the task model, and the device model so as to construct the user interface.~~

H. Amendments to Paragraph [0008]

Please amend paragraph [0008] as shown below.

[0008] In accordance with another aspect of the present invention, a method of interactively designing a user interface comprises the following: creating a domain model, a user model, a task model, a device model, and a presentation elements library, wherein the domain model defines application requirements for which the user interface is to be used, wherein the user model defines user requirements of the users who are to interface with the user interface, wherein the task model defines task requirements of tasks to be performed between the user interface and the users, wherein the device model defines interaction delivery devices that are available to deliver the user interface, and wherein the presentation elements library contains the display objects used to present information to or acquire information from a user of the user interface being designed; storing the domain model, user model, task model, device model, and presentation elements library into computer readable media; generating a set of presentations, wherein each presentation in the set of presentations comprises an interaction delivery device and a display object that meets the requirements of the interaction delivery device, wherein the interaction delivery device is selected from the set of interaction delivery devices in the device model that meets the user requirements defined by the user model and the task requirements defined by the task model, and wherein the display object is selected from the set of display objects in the presentation elements library that meets the task requirements defined by the task model and the application requirements defined by the domain model; and displaying the set of presentations to a user interface designer. ~~creating a domain model, wherein the domain model contains information characterizing a designer selected application in a designer-selected domain; creating a user model, wherein the user model contains information characterizing users of the user interface; creating a task model, wherein the task model contains task primitives to be performed between the user and the user interface, and wherein the task model also contains types of information required by the task primitives; creating a device model, wherein the device model contains information characterizing interaction delivery devices that are available to deliver the user interface; and, matching the information contained in the domain model, the user model, and the task model to the information contained in the device model and to presentation elements contained in a presentation elements so as to construct the user interface, wherein the presentation elements comprise objects of the user interface that present information to the user.~~

I. Amendments to Paragraph [0009]

Please amend paragraph [0009] as shown below.

[0009] In accordance with still another aspect of the present invention, a method of interactively designing a user interface comprises the following: storing a domain model into computer readable media, wherein the domain model defines application requirements for which the user interface is to be used; storing a user model into computer readable media, wherein the user model defines user requirements of the users who are to interface with the user interface; storing a task model into computer readable media, wherein the task model defines task requirements of tasks to be performed between the user interface and the users; storing a device model into computer readable media, wherein the device model defines interaction delivery devices that are available to deliver the user interface; storing a presentation elements library into computer readable media, wherein the presentation elements library contains the display objects used to present information to or acquire information from a user of the user interface being designed; generating a set of presentations, wherein each presentation in the set of presentations comprises an interaction delivery device and a display object that meets the requirements of the interaction delivery device, wherein the interaction delivery device is selected from the set of interaction delivery devices in the device model that meets the user requirements defined by the user model and the task requirements defined by the task model, and wherein the display object is selected from the set of display objects in the presentation elements library that meets the task requirements defined by the task model and the application requirements defined by the domain model; and displaying the set of presentations to a user interface designer. ~~storing a domain model in a computer readable memory, wherein the domain model contains information characterizing data, concepts, and relations of an application in a domain as specified by a designer; storing a user model in the computer readable memory, wherein the user model contains information characterizing roles and preferences of users of the user interface; storing a task model in the computer readable memory, wherein the task model contains task primitives to be performed between the user and the user interface, information required of the task primitives, and sequences of the task primitives; storing a device model in the computer readable memory, wherein the device model contains information including modality characterizing interaction delivery devices that are available to deliver the user interface; matching the interaction delivery devices in the device model to the information required of the task primitives and to the information characterizing the users so as to identify interaction delivery devices that support the information requirements and the users; matching presentation elements to the task primitives and~~

to the data, concepts, and relations of the domain model so as to identify ones of the presentation elements that support the task primitives and the data, concepts, and relations of the domain model; and, generating the user interface based on the identified interaction delivery device and the identified presentation elements.

J. Amendments to Paragraph [0010]

Please amend paragraph [0010] as shown below.

[0010] ~~In accordance with yet~~ Yet another aspect of the present invention is a computer readable media with instructions to cause a processor to perform the steps of: receiving a domain model, a user model, a task model, a device model, and a presentation elements library, wherein the domain model defines application requirements for which the user interface is to be used, wherein the user model defines user requirements of the users who are to interface with the user interface, wherein the task model defines task requirements of tasks to be performed between the user interface and the users, wherein the device model defines interaction delivery devices that are available to deliver the user interface, and wherein the presentation elements library contains the display objects used to present information to or acquire information from a user of the user interface being designed; generating a set of presentations, wherein each presentation in the set of presentations comprises an interaction delivery device and a display object that meets the requirements of the interaction delivery device, wherein the interaction delivery device is selected from the set of interaction delivery devices in the device model that meets the user requirements defined by the user model and the task requirements defined by the task model, and wherein the display object is selected from the set of display objects in the presentation elements library that meets the task requirements defined by the task model and the application requirements defined by the domain model; and displaying the set of presentations to a user interface designer. ~~, a method of interactively designing a system comprises the following: storing a domain model, a user model, a task model, and a device model in a computer readable memory, wherein the domain model characterizes an application for which the system is to be used, wherein the user model characterizes a user who is to use the system, wherein the task model characterizes tasks to be performed between the system and the user, and wherein the device model characterizes devices to support the system; and, matching characteristics in the domain model, the user model, the task model, and the device model so as to construct the system.~~